

## Claims

1. Squeegee unit for a rotary screen-printing device,  
5 comprising a blade squeegee, with a squeegee edge which is designed, during operation of a rotary screen-printing device in which the squeegee unit is mounted, to be pressed against the inner side of a cylindrical screen of the rotary screen-printing device, and a squeegee holder to which the squeegee is fastened,  
10 it being possible for the squeegee edge to be moved away from the squeegee holder and towards the squeegee holder, and a resilient element being arranged between the squeegee edge and the squeegee holder, in such a manner that the squeegee edge is pressed away from the squeegee holder by spring force,  
15 characterized in that the squeegee unit is provided with travel-limiting means which are designed in such a manner that the squeegee edge can move over a relatively short distance from the working position in the direction away from the squeegee holder.
2. Squeegee unit according to claim 1, in which the squeegee  
20 edge can move over a distance of at most 1 mm and preferably over a distance of at most 0.5 mm from the working position.
3. Squeegee unit according to claim 1 or 2, in which the squeegee edge, in the limit position of the squeegee edge defined by the travel-limiting means, is under a prestress which  
25 is supplied by the resilient element and is directed away from the squeegee holder.
4. Squeegee unit according to claim 3, in which the level of the prestress is adjustable.
5. Squeegee unit according to claim 3 or 4, in which the  
30 squeegee is formed by at least one elongate, rigid squeegee bar which is provided with a squeegee edge directed away from the squeegee holder and which can move transversely to its longitudinal direction with respect to the squeegee holder, in which the resilient element is formed by at least one  
35 compression spring arranged between the squeegee bar and the squeegee holder, and in which the travel-limiting means are formed by a travel limiter arranged on the squeegee holder and a stop which is arranged on or in the squeegee bar and interacts with the travel limiter.

6. Squeegee unit according to claim 5, in which the stop is formed by the edge of a recess which is formed in the squeegee bar and in which the travel limiter engages.

7. Squeegee unit according to claim 5 or 6, in which the squeegee bar is secured to the squeegee holder by means of a set of parallel leaf springs which act transversely to the longitudinal direction of the squeegee bar.

8. Squeegee unit according to one of claims 5-7, in which the squeegee bar is composed of at least one elongate squeegee support profile and an edge strip which is secured to the squeegee support profile, forms the squeegee edge and is made from slightly flexible material.

9. Squeegee unit according to claim 8, in which the edge strip is arranged on a squeegee blade which in turn is secured to the squeegee support profile and thereby bears taut against the squeegee support profile.

10. Squeegee unit according to one of claims 5-9, in which the prestress of the at least one compression spring is adjustable by means of a spring support which bears against the opposite end of the compression spring from the squeegee bar and the position of which is adjustable in the working direction of the compression spring.

11. Squeegee unit according to claim 10, in which the position of the spring support is adjustable by virtue of the fact that the spring support is supported on a ball which is guided in the squeegee holder and is in turn supported on a wedge-shaped ball support which can be displaced transversely to the working direction of the compression spring.

12. Squeegee unit according to claim 11, provided with two or more compression springs, each with an associated spring support, ball and wedge-shaped ball support, the ball supports being mounted on or forming part of an elongate sliding bar which is guided in the longitudinal direction of the squeegee holder.

13. Squeegee unit according to claim 1 or 2, in the blade squeegee is formed by at least one elongate squeegee bar which is designed to be rigid in cross section and is secured to the squeegee holder via at least one spring hinge with high stiffness.

14. Squeegee unit according to claim 13, in which the squeegee bar is composed of at least one elongate squeegee support profile and a squeegee strip which is secured to the squeegee support profile, forms the squeegee edge and is made from slightly flexible material.

15. Squeegee unit according to claim 14, in which the edge strip is arranged on a squeegee blade which bears taut against the squeegee support profile.

16. Squeegee unit according to claim 15, in which the squeegee support profile is divided in the longitudinal direction into segments positioned close together.

17. Squeegee unit according to one of claims 14-16, in which the squeegee support profile forms an integral part with an elongate bar which forms part of the squeegee holder, and in which the spring hinge is formed by an intermediate part which is located between the squeegee support profile and the elongate bar and has a thickness which is less than the thickness of the squeegee support profile.

18. Squeegee unit according to one of claims 14-17, in which the squeegee blade is elongate and in cross section is approximately L-shaped, and in which that longitudinal edge region of the squeegee blade which is positioned opposite the edge strip is clamped into a slot in the elongate bar, and that section of the squeegee blade on which the edge strip is arranged bears taut against the squeegee support profile.

19. Squeegee unit according to claim 18, in which the squeegee blade is positioned with respect to the squeegee support profile by virtue of the longitudinal edge of the squeegee blade located next to the edge strip bearing against a projection on the edge of the squeegee support profile.

20. Squeegee unit according to one of claims 13-19, in which the stiffness of the hinge spring is such that for a vertical displacement of the squeegee edge with respect to the squeegee holder of 0.1 mm, a force of 0.1 - 1.0 N, preferably 0.4 - 0.8 N and in particular 0.6 N is required per millimetre of squeegee width.